Panasonic

Operating Instructions EB-GD55
Digital Cellular Phone

GD55

GSM

Before operating this phone, please read these instructions completely and save this manual for future use. ***Charge battery before operation.***

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Safety First

Your new phone is a convenient and effective communications tool, but it can be hazardous when used improperly. To avoid harming yourself or anyone else, please review the following information before using your phone.

Batteries

Batteries can cause property damage, injury, or burns if the terminals are touched with a conductive material (for example, metal jewelry, keys, and so on). Therefore, use caution when handling a charged battery. Additional precautions and notes are listed below:

- Never throw a battery into a fire; it may explode.
- Fully recharge the battery if the battery is low or as soon as the low-battery alert beeps.
- Do not drop the battery.
- Do not allow bridging of battery contacts with metallic objects.
- Do not remove the battery from the phone while the phone is powered on. Settings you have changed may revert to their previous settings.

A recyclable lithium ion/polymer battery powers your phone. Please call 1-800-8-BATTERY for information on how to recycle the battery.

Charging Devices

Use only Genuine Panasonic charging accessories. Use of attachments not recommended by Panasonic or your wireless service provider may result in fire, electrical shock, or injury. Panasonic is not responsible for damage caused by using non-Panasonic accessories.

- Do not expose charging adapters to moisture, water, or the weather.
- Do not use an adapter with a damaged cord.
- When using a DC adapter in an automobile, a small amount of electricity flows through the adapter, even if the phone is turned off. Remove the plug from the cigarette lighter whenever the phone will be left in the vehicle for long periods of time.
- Always charge the battery in a well ventilated area, not in direct sunlight, between 41°F (5°C) and 95°F (35°C). It is not possible to recharge the battery if it is outside this temperature range.
- Do not incinerate or dispose of the battery as ordinary trash. The battery must be disposed of in accordance with local legislation and may be recycled.

General

- Do not use the phone in extreme temperature or humidity. The specified operating temperature range is -22°F to +140°F (-30°C to +60°C).
- Extreme temperatures may have a temporary effect on the operation of your phone. This is normal and does not indicate a fault.
- Do not expose the phone (particularly the display) to direct sunlight for extended periods of time or to a humid, dusty or hot area.
- Do not attempt to disassemble the phone. There are no user-serviceable parts inside.
- Do not subject the equipment to excessive vibration or shock.
- Do not expose the phone to rain or spill liquids on it. If the equipment becomes wet immediately remove the battery and charging device and contact your dealer.
- Do not carry the phone by holding the antenna.
- Do not use any accessories other than those designed for use with your phone.
- Use of attachments not recommended or sold by Panasonic or your wireless service provider may result in fire, electrical shock, or injury.
- Panasonic is not responsible for damages caused by using non-Panasonic accessories.
- Pressing any of the keys may produce a loud tone. Avoid holding the phone close to the ear while pressing the keys.
- Keep metallic items that may accidentally touch the battery terminals away from the equipment. Battery damage may occur.
- When disposing of any packing materials or old equipment check with your local authorities for information on recycling.
- If connecting the phone to an external source, read the operating instructions of the equipment for the correct connection and safety precautions.
- If connecting the phone to an external source, verify that the phone is compatible with the product to which you are connecting it.

Availability Of Service

This phone, like any wireless phone, operates using radio signals, wireless and landline networks, and user-programmed functions. Because of this, connection in all conditions cannot be guaranteed. Therefore, you should never rely solely on any wireless phone for essential communications (for example, medical emergencies).

Emergency (911) Service

If you need to make an emergency (911) call, power the phone on, dial 911, and press . Emergency calls can be made regardless of lock setting and with or without a SIM card. If no SIM card is installed, press **SOS,** then press **Yes**. Remember, to make or receive any call, the phone must be switched on and in a service area that has adequate signal strength. Even if you are within the coverage area of your wireless service provider, you may be in an area with insufficient signal strength to place a 911 call. Emergency calls might not be possible on all wireless phone networks or when certain network service and/or phone features are in use.

Safety Tips

Following the suggestions in this section will help ensure safe and efficient operation of your Panasonic phone.

This Model Phone Meets The Government's Requirements For Exposure To Radio Waves.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. Tests for SAR are conducted using standard operating positions specified by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use at the ear is 0.982 W/kg and when worn on the body, as described in the "Body –Worn Operation" section, is 0.364 W/kg. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences

between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF emission guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of **http://www.fcc.gov/oet/fccid** after searching on FCC ID HFS-GD55.

Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at **http://www.wow-com.com**.

Caution: All Panasonic branded accessories are tested and comply with FCC RF exposure requirements. Non-Panasonic accessories may not comply.

Body-Worn Operation

This device was tested for body-worn operations with the back of the phone kept 10 mm from the body. To maintain compliance with FCC RF exposure requirements, use only belt-clips, holsters or similar accessories that maintain a 10 mm separation distance between the user's body and the back of the phone, including the antenna. The use of belt-clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

Antenna Care

Do not use the phone with a damaged antenna. Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate FCC regulations.

Phone Operation

Normal Position: Hold the phone as you would any other telephone, with the antenna pointed up and over your shoulder.

For Efficient Operation: For your phone to operate most efficiently, do not touch the antenna unnecessarily when the phone is in use. Contact with the antenna affects call quality and may cause the phone to operate at a higher power level than otherwise needed.

Driving

Important: Check the laws and regulations on the use of wireless telephones in the areas where you drive. Always obey them. Also, if using your phone while driving:

- Give full attention to driving—driving safely is your first responsibility;
- Use handsfree operation, if available;
- Pull off the road and park before making or answering a call if driving conditions so require.

Electronic Devices

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals from your wireless phone.

Pacemakers: The Health Industry Manufacturers Association recommends that a minimum separation of 6 inches (6") or 15 centimeters (15 cm) be maintained between a handheld wireless phone and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations of Wireless Technology Research.

Persons with pacemakers:

- Should ALWAYS keep the phone more than six inches from their pacemaker when the phone is turned ON;
- Should not carry the phone in a breast pocket;
- Should use the ear opposite the pacemaker to minimize the potential for interference;
- If you have any reason to suspect that interference is taking place, turn your phone OFF immediately.

Hearing Aids: Some digital wireless phones may interfere with some hearing aids. In the event of such interference, consult your wireless service provider and hearing aid manufacturer.

Other Medical Devices: If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from external RF energy. Your physician may be able to assist you in obtaining this information.

Turn your phone OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Vehicles: RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

Posted Facilities: Turn your phone OFF in any facility where posted notices so require.

Aircraft

FCC regulations prohibit using your phone while in the air; switch off your phone before boarding an aircraft unless otherwise advised by airline personnel.

Blasting Areas

To avoid interfering with blasting operations, turn your phone OFF when in a "blasting area" or in other areas posted: "Turn off two-way radio." Obey all signs and instructions.

Potentially Explosive Atmospheres

Turn your phone OFF when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gas stations; below deck on boats; fuel or chemical transfer or storage facilities; vehicles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

For Vehicles Equipped With An Air Bag

An air bag inflates with great force. DO NOT place objects, including both installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If in-vehicle wireless equipment is improperly installed and the air bag inflates, serious injury could result.

For U.S. Customers: Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58).

For a copy of this standard, contact:
National Fire Protection Association
One Batterymarch Park
PO Box 9101
Quincy, MA 02269

Phone: 1-800-344-3555
Web site: **www.nfpa.org**
E-mail address: Custserv@NFPA.org

See “Consumer Update on Mobile Phones” published by the U.S. Food and Drug Administration on page 38.

Ten (10) Driver Safety Tips

Your wireless telephone gives you the powerful ability to communicate by voice-almost anywhere, anytime. But an important responsibility accompanies the benefits of wireless phones, one that every user must uphold. When driving a car, driving is your first responsibility. When using your wireless phone behind the wheel of a car, practice good common sense and remember the following tips:

- **Get to know your wireless phone and its features such as speed dial and redial.** If available, these features help you to place your call without taking your attention off the road.
- **When available, use a hands free device.** If possible, add an additional layer of convenience and safety to your wireless phone with one of the many hands free accessories available today.
- **Position your wireless phone within easy reach.** Be able to access your wireless phone without removing your eyes from the road. If you get an incoming call at an inconvenient time, if possible, let your voice mail answer it for you.
- **Let the person you are speaking with know you are driving; if necessary, suspend the call in heavy traffic or hazardous weather conditions.** Rain, sleet, snow, ice, and even heavy traffic can be hazardous.
- **Do not take notes or look up phone numbers while driving.** Jotting down a "to do" list or flipping through your address book takes attention away from your primary responsibility, driving safely.
- **Dial sensibly and assess the traffic; if possible, place calls when you are not moving or before pulling into traffic.** Try to plan calls when your car will be stationary. If you need to make a call while moving, dial only a few numbers, check the road and your mirrors, then continue.
- **Do not engage in stressful or emotional conversations that may be distracting.** Make people you are talking with aware you are driving and suspend conversations that have the potential to divert your attention from the road.
- **Use your wireless phone to call for help.** Dial 9-1-1 or other local emergency number in the case of fire, traffic accident or medical emergencies. Remember, it is a free call on your wireless phone!
- **Use your wireless phone to help others in emergencies.** If you see an auto accident, crime in progress or other serious emergency where lives are in danger, call 9-1-1 or other local emergency number, as you would want others to do for you.
- **Call roadside assistance or a special non-emergency wireless assistance number when necessary.** If you see a broken-down vehicle posing no serious hazard, a broken traffic signal, a minor traffic accident where no one appears injured, or a vehicle you know to be stolen, call roadside assistance or other special non-emergency wireless number.

"The wireless industry reminds you to use your phone safely when driving."

For more information, please call 1-888-901-SAFE or visit **www.wow-com.com**

Information on this page provided by the Cellular Telecommunications Industry Association.

Quick Reference

Location of Controls

Navigation Key: Use to move up and down through the options in the display area. From idle mode, press to enter **Own Menu**. **Own Menu** is a shortcut to access your favorite menu(s). You can set your preference(s) for **Own Menu** in the **Personalise** menu.

Perform the functions indicated by text shown on the LCD screen. From idle, press and hold right soft key to enter **Messages**, press and hold left soft key to enter **Profile Mode List**.

Numeric keypad. Press and hold 0 + to enter a "+" (for international dialing) or "P" (for inserting a pause).

Make a call or answer a call. From idle, press to check the last dialed list.

To end a call, return to idle mode, return to previous page or reject an incoming call. Press and hold to switch the phone on/off.

From idle, press and hold to activate **Browser**.

From idle, press and hold to switch the **Mute Mode** on and off. This will mute and unmute the phone's ringer.

Display Icons

Status Icons

The status icons are displayed or animated according to the currently activated functions. The Antenna, Signal and Battery icons are displayed when the handset is turned on and connected to a network.

	is displayed when you are registered on a non-home network – **roaming.**
	is displayed when **call divert** is enabled.
	is displayed when **vibration alert** is enabled.
	is displayed when **all tones** or **ring volume** is off.
	flashes when an **unread message** is stored or lights when message area is full.
	is displayed when **Key Guard** is enabled.
	indicates that it is possible to make emergency calls.
	indicates the network signal strength.
	indicates the battery level: [...] - low battery.
	Indicates the alarm is set.

Getting Started

Removing the Battery

Open the battery by moving the release-latch upward then lift and remove the battery.

Note: Before removing the battery, turn the phone off completely.

Installing the SIM Card

The SIM card is inserted into the back of the phone underneath the battery. Hold the phone in a horizontal position where the antenna is on your right hand side and slide the SIM card into the slot, with the metal connectors facing down. Ensure that the bevelled corner is positioned in the top left corner.

Installing the Battery

Align the two notches on the bottom edge of the battery with the two tabs along the bottom edge on the back of the phone. Push the battery until it clicks into place.

Charging the Battery

Holding the Fast Travel Charger connector with the power icon facing up, plug the connector into the base of the phone. Then plug the Fast Travel Charger into a standard AC wall outlet. The charger indicator bar will start scrolling.

Note: It is recommended to charge for 4 hours before first use. Do not force the charger connector, to do so it may damage the charger and phone.

Battery Level Indicator

	While charging	Charging complete
Phone on		
Phone off		LCD Battery Indicator Off

Disconnecting the Fast Travel Charger

When charging is completed, disconnect the charger from the AC wall outlet. Grasp the Fast Travel Charger connector and push downward to release it from the base of the phone.

Low Battery Warning

When the battery power is low a warning tone will sound and a **LOW BATTERY** ( ) message will be displayed. If this occurs during a conversation, finish your call immediately. The power will automatically shut off after the warning tone. Fully recharge the battery. (Calls can be made and received while the phone is charging, but doing so extends charging time). See “Charging the Battery” on page13.

Accessories

The following replacement accessories are available for your phone. To order replacement accessories call 1 (800) 833-9626.

EB-BSD55W - White Battery (720mAh Li-ion)
EB-BSD55S – Silver Battery (720mAh Li-ion)
EB-CAD55US – Fast Travel Charger

TTY Notice

This product is **Not TTY Compatible**. For accessibility information visit our website at http://www.panasonic.com/pcsc/ptsc/accessibility.asp or call 800-414-4408 or TTY 770-338-6204.

Basic Operation

Thank you for purchasing this Panasonic digital cellular phone. This phone is designed to operate on the Global System for Mobile Communications (GSM).

Before operating this phone read the "Safety First" section on page 4.

Powering the Phone On/Off

Insert SIM card, then attach battery and fully charge before using your phone. Press and hold to power the phone on or off.

Making a Call

Phone must be on and network coverage must be available. To make a call, start in idle mode. Enter the phone number, press .

International Dialing

In idle mode press and hold 0+ until "+" is displayed. Enter a country code, area code, phone number, press .

Note: Many countries / regions include an initial "0" in the area code. This should, in most cases, be omitted when dialing international numbers.

Answering a Call

Press to answer a call or to reject the call.
If a call is not answered, the number of incoming calls missed will be displayed.

Ending a Call

Press .

Emergency Calls

To make an emergency call the phone must be on and the antenna symbol must be displayed.

Enter **911**, press . If no SIM card is installed, press **SOS,** then press **Yes**.

Initially Setting the Time/Date

You can set time and date displayed on the idle screen.
Idle > Menu > Application > Clock > Clock Setting > Time & Date > Set to set time and date. Here is a step by step explanation for your reference. All instructions in this menu will be presented by the > symbol.

<Step Instruction> From Idle mode, press **Menu** and use to navigate to **Application**, press **Select** and use again to highlight **Clock**. Press **Select** and use cursor to highlight **Clock Setting,** press

Select and use to select **Time & Date.** Press and **Set** to get to the editing screen and use to move cursor to modify. You can choose the date and time format. Enter the digits for the date and time in the format you prefer. Enter the digits for the time using 24-hour clock. Press **OK** return to the previous menu.

Accessing the Phonebook to Dial

You can access the phonebook to browse or dial numbers.

Idle > Names > (searching a name) >

Earpiece Volume Control

During a call, press the top or bottom to increase or decrease the earpiece volume.

SIM Lock

Once you set this function with your SIM card installed, the phone will only recognize your SIM. When a different SIM card is inserted, the phone's PIN needs to be entered.

Idle > Menu > Phone Menu > Security > SIM Lock > Enter 4 – 8 digital phone code > OK > Set (select **On** or **OFF**) **> OK.**

To set SIM Lock, set "Phone Code" in the **Phone Lock** menu.

Using the PIN (4 to 8 digits)

The PIN (Personal Identification Number) protects your SIM against unauthorised use. If you enable the PIN, every time the phone is turned on you will be prompted to enter the PIN.

The PIN2 controls security for the **Fixed Dial** and **Call Charge** metering. If either PIN/PIN2 is entered incorrectly 3 times the phone will be locked and then you will need to enter the PUK/PUK2 code. Contact your wireless service provider for the PUK/PUK2 code.

Note: If the PUK/PUK2 code is entered incorrectly 10 times, the SIM card will cease to operate permanently. All information in the SIM card will be lost and the SIM card will need to be replaced. Contact your wireless service provider for more details.

Enabling/Disabling the PIN

Once you enable the PIN, you have to enter the PIN whenever you turn the phone on.
Idle > Menu > Phone Menu > Security > Codes > PIN Control >
Enter **PIN** (Between 4 and 8 digits) **> OK > Set** (Select **On** or **Off**) **> OK**

Setting Alert Type

When required, the phone can be set up to vibrate or ring when a call is received. **Idle** > **Menu** > **Personalise > Alert Type** Choose one type from **None, Ring & Vibration, Vibration only** or **Ring only.**

Key Guard

This feature temporarily 'locks' keypad to prevent accidentally pressing keys.
Idle > Menu > Key Guard > Yes
Once enabled, icon will appear on the display.
Disable the Key Guard: **Free > OK**

Phonebook

Creating a Number

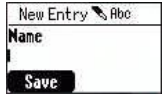
1 In **Idle** mode enter the numbers you would like to save and press **Save.**

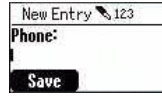
2 The other option to create a number is **Idle > Menu > Phonebook > Create > SIM Phonebook** or **Mobile Phonebook**.

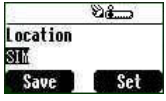
3A Choosing SIM Phonebook

3A-1 Enter the Name --- see “Text Input” on page 24. Press down to the next screen.

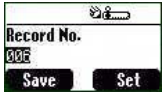
3A-2 Enter Phone numbers using the keypad. Then press down to the next screen.







3A-3 Select Location. You can choose a storing location in SIM or FDN by pressing **Set.** Press down to the next screen.



3A-4 Select Record No. You can choose a location record number by pressing **Set**.

3A-5 Press **Save**.

3B Choosing Mobile Phonebook

3B-1 Enter the Name --- see “Text Input” on page 24. Press down to the next screen.

3B-2 Enter the Phone number using the keypad. Press down to the next screen.

3B-3 Select a Group. You can locate phonebook contacts in different groups, such as Friends, Family etc., by pressing **Set**.

3B-4 Select Melodies. You can define a specific melody for each person.

3B-5 Press **Save**.

Grouping Phonebook Entries

The ability to group phonebook entries together such as: Friends, Colleagues, Family, Others, VIP or No Group etc., you can define a specific melody for each group. In this case, when a member calls, you can identify that the call is coming from a particular group.

Reviewing the Numbers from Groups

You can only review and delete group members in this submenu. Members cannot be grouped here.

1 **Idle > Menu > Phonebook > Group Setting**

2 Use to select a group

3 **View** the Group's members or **Delete** the group members.

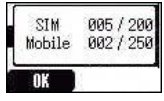
If you haven't grouped members in the phonebook, **List Empty** will display.

Reviewing the Phonebook

The **Review** function in the phonebook menu shows how many locations are available in the **Phonebook**.

Idle > Menu > Phonebook > Review

A summary of the Phonebooks will be displayed.



Hot Key Dial Numbers

Hot Key Dial allows quick access to dial phone numbers from the **SIM Phonebook**. Press and hold any digit from 1-9 to recall the first 9 numbers stored in the corresponding SIM location. To use **Hot Key Dial,** you must first activate the feature.

Idle> Menu > Phonebook > Hot Key Dial > On/Off

My Numbers

My Numbers is a convenient part of **Phonebook** where voice, fax and data phone number(s) can be stored and viewed. This feature is SIM card dependent.

Adding Numbers

From **Idle > Menu > Phonebook > My Numbers > Menu > Edit >** enter Phone Number **> Save.**

Personalising Your Phone

Language

It is possible to change the language that the phone uses for both display messages and text entry.

Idle > Menu > Personalise > Language > (select a preferred language)

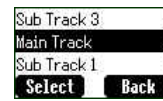
Changing the Ring Tones

The ring tones and volumes of the phone can be changed to one of many pre-defined sounds. You can also use the **Melody Composer** to generate a custom ring tone.

Idle > Menu > Personalise > Tones > Ring Type > (select a preferred category) **>** (select a preferred sound)

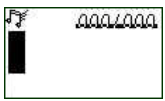
Composing a Melody

Idle > Menu > Personalise > Tones > Melody Composer > (select My Music) **> Melody Edit >** (select track)



Using the following table as a reference, enter the notes (from the choice of low, middle and high), rests, and the duration of each, to generate your composition.

Key	1	2 abc	3 def	4 ghi	5 jkl	6 mno	7 pqrs	8 tuv	9 wxyz	0 +	*	#
Func.	C	D	E	F	G	A	B	Rep.	.	Rest	Duration	Low, Middle, High



If you want to attach the sub tracks, remember to save your earlier main track first and then press return to the previous menu, then press to select **Sub Track** and start another edit. When you finish the sub tracks edit, press **Menu** and **Save**. Press twice to return to previous menus, and select **Play** to listen to your melody.

After composing the melody, press **Menu** and you can choose a Tempo and instruments. When the composition is complete press to save.

Display Setting

You can set **Idle Screen, Greeting, Animation, Contrast** and **Back Light**.

Greeting

A personalised greeting can be programmed for when the phone is turned on.
Idle > Menu > Personalise > Display Setting > Greeting > Edit
Use text entry to add a greeting, see "Text Input" on page 24.

Profile Mode

In the Profile Mode, you can choose and customize an appropriate mode from **Headset, Normal, Meeting,** and **Noisy.**

Idle > Menu > Personalise > Profile Mode > (select a mode) **> Activate > OK**

User Messages

There are 10 pre-set commonly used messages from which to choose. There are also 5 empty spaces for you to create your own messages. Scroll to a user message and press **Select** if you would like to edit.
Idle > Menu > Personalise > User Messages > select an entry

Defaults

Restore your phone's settings to the factory programmed defaults.
Idle > Menu > Personalise > Defaults > Select > Yes

Own Menu

A shortcut access that allows you to turn on/off the following options: Browser, Game, Phonebook, Language, Alert Type, Tones, Idle Screen, Profile Mode, Alarm, Calculator, Schedule, Received List, Send Message, Clock Setting and Currency. Once you select one or more of these features in the **Own Menu** list, you can quickly select them from Idle by pressing .
Idle > Menu > Personalise > Own Menu > select option(s)

My Phonebook

Use this option to choose which phonebook name list (SIM or Mobile) to be selected when you press **Names** from the idle mode.
Idle > Menu > Personalise > My Phonebook > SIM or **Mobile**

Game (STK)

If your SIM card provides SIM Tool Kit services, this menu will become the STK gateway. You can still access games from **Application**.
Idle > Menu > Game or **Idle > Menu > Application > Game**

When you see the mouse, press Numerical key from 1 to 9 to hit the mouse with the highest speed. Keep in mind that the Cat is not your target. Example: if you press 5, you will hit what is hidden in the 5th hole. This game will end automatically within a limited period of time. After ending, you will get a score. This score might be the highest one in the record. Good luck!

Text Messages

It is possible to receive, display, edit and/or send text messages up to 760 characters (depending on characters or symbols).

Setting the Phone for Short Text Messages

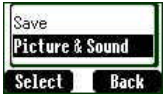
Before text can be sent, it is necessary to enter the Message centre number into Parameters (your wireless service provider will supply the Message Centre number).
The Message Centre number may have been pre-programmed on the SIM card by your wireless service provider.

Setting the Message Centre Number

Idle > Menu > Messages > Parameters > Message Centre
Enter message centre number in international dial form – see “International Dialing” on page 15.

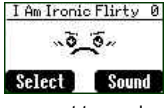
Creating a Text Message

Idle > Menu > Messages > Create Press numeric Key 1 - 0+ repeatedly (if required) to enter and select characters, numbers or special symbols. Press * to switch “Input Mode”. Press # to turn T9 on/off. See page 24 for detailed information about entering text.



EMS (Enhanced Message Service)

While editing the message, press **Menu > Picture & Sound** to insert/add pictures or sound into the message.



However, this service works only if the receiver’s mobile phone supports this function.

Use ↕ to select the pictures you want to send and press ●. Or press ▭ to select music. Please note that one message can only transmit 10 sounds.

When the message is complete, press **Menu** to **Send, Save** or **Save and Send.** Press **Send**, enter the destination phone number or press **Names** to select from stored numbers. Then press **OK** to send.

1 / ( ) < = > % ~ € &

a b c 2 ä à ç **or** A B C 2 Ä

d e f 3 é è **or** D E F 3 É

g h i 4 ì **or** G H I 4

j k l 5 **or** J K L 5

m n o 6 ö ñ ò **or** M N O 6 Ö Ñ

p q r s 7 ß **or** P Q R S 7

t u v 8 ü ù **or** T U V 8 Ü

w x y z 9 æ Ø å **or** W X Y Z 9 Æ Ø Å

Space 0 . , ? ! + - : ¿ ¡ ” ’ ; _

* Γ Δ Θ Λ Ξ Π Σ Φ Ψ Ω

Press and hold: space # £ $ ¥ ¤ @ \ §
Press to turn T9 on or off.

Switch Input Modes

T9® Text Input

Using this mode of text entry dramatically reduces the number of key presses required:

Press a key once for any letter you require on that key. The desired letter may not be displayed. Continue pressing other keys until the end of a word is reached; then check that the word has been typed correctly before continuing on to the next word.

If the combination of letters typed has produced a word, which is not the one you require, press repeatedly until the correct word is displayed. Continue to the next word.

If the word you require is not in the internal dictionary (i.e. It is a proper noun or a rarely used word) then it should be entered using the Normal (ABC) mode.

Other Text Modes

To access any of the other text entry modes use to scroll through until the desired mode is displayed. When using Capital letter mode (ABC), number mode (123), etc., each time a key is pressed in quick succession it will display the next character available on that key. Releasing the key, or pressing another key will enter the currently displayed character and the cursor will move to the next position.

Editing Text

Press and hold to move the cursor up or down one text line (or field in Phonebook). Press to move left or right one character. When the cursor is moved over a character and another key is pressed, the new character will be inserted immediately before the selected character.

Press **Clear** to delete the character to the left of the cursor.

Receiving Text Messages

When a Short Text Message is received, the message icon will flash on the display, with an audible tone.
Idle > Menu > Messages > Received List > Read to read the message.

Use to navigate through the messages and to identify the sender and the time the message was sent.

Note: If the message indicator is displayed, it means that the message area is full and you need to delete old messages in order to receive new ones.

Reply, Forward, Edit and Delete a Message

When a message is received, follow the prompts to create a reply and edit new message, forward, or delete the message.

User Messages

Default messages can be chosen to use in a message. The default messages can be used as/is or can be edited before use. See **"User Messages"** under **Personalise** on page 21. Use to select.
Idle > Menu > Messages > User Messages > select a preferred entry.

Review

Review allows you to check usage of the message area.
Idle > Menu > Messages > Review

Parameters

Idle > Menu > Messages > Parameters

The following parameters can be set:

Message Centre

Enter or change the Message Centre's number. Usually the number will already be pre-programmed in the SIM card by your wireless service provider, so you may not need to enter it again.

Protocol

The Message Centre may be able to convert the message to the format specified by the selected protocol.

Lifetime

This is the duration that your message is stored at the Message Centre. Delivery attempts will be repeated until the message has been delivered or lifetime setting is expired.

Report

When your message has been delivered, a confirmation will be received.

Broadcast

You need to specify the 'topic(s)' of information and the language that you wish to receive as broadcasts. You must turn on "**Broadcast**" before you can receive them.

Idle > Menu > Messages > Broadcast > Topic List > Current to cycle through the available topics. To add new topics, select <**Add Topic**> and select a preferred topic, or select **User Defined** to create a new topic.

Note: This function is Network dependent.

Key Guard

The Key Guard function is used to prevent keys from being accidentally pressed when the phone is being carried.

Idle > Menu > Key Guard > Select > Yes to enable "Key Guard"

Emergency calls can still be made - see ''Emergency Calls'' on page 15.
Press 911 and .

Note: When making emergency calls with the ''Key Guard'' enabled, there will be no visual indication that the number is being dialed

Disabling Key Guard

When **Free** is displayed, press **Free > OK**.

Browser

The phone's WAP (Wireless Application Protocol) Browser enables you to access Internet services supported by the network, such as news, weather reports, sports etc.

Browser Setting

Before Internet services can be accessed, you need to subscribe with your wireless service provider or Internet Service Provider (ISP) to enable the relevant configuration information. Please contact your wireless service provider to ensure your network setting is correct.

Note: Modifying previously entered settings can cause failure of the Browser.

Idle > Menu > Browser > Sever Setting

There are two server profiles pre-configured in the phone; use to select one of the profiles. Otherwise, you have to enter the essential data to set your browser (sever name, dial number, call type, login name, password, IP address, IP port, homepage and linger time) manually before using.

Note: Contact your wireless service provider for configuration parameters.

Once the entry is completed, use to choose a setting then **Activate**. The first time that the browser is activated there will be no content stored so the Home URL content will be displayed (as defined by the wireless service provider). The Home URL will be recalled from the cache, each time the browser is activated. (Cache is the phone's memory that stores content downloaded in the past).

Browser Menu

Starting Browser

Idle > Menu > Browser > Start Browser

Once you have set and activated the browser setting, you can start browsing the Home page of your wireless service provider.
The Browser also contains its own menu, which is applicable when content is currently being displayed (either on-line or off-line). To access the Browser Menu, select the browser icon in the top left of the screen. This menu has the following options: Back, Home, Go to URL, Mark Site, Book Marks, Inbox, Reload, Settings, About.

Bookmarks

Idle> Menu > Browser > Bookmarks

In this menu, there are 10 empty places for you to enter your favorite website URL's. You can also Edit, Erase, and Launch the website.

Phone Menu

Call Service

Time/ Charges

Idle > Menu > Phone Menu > Call Service > Time/Charges Use to select one of the functions: **Last Call, All Voice Calls, Cost Left.**
Last Call function will display the duration and call charge, if available, of the last call. Times are indicated as: minutes (0-59) and seconds (0-59).
All Voice Calls function displays the accumulated duration and call charge, including incoming and outgoing calls.
Cost Left function will show the remaining units that you have set beforehand. See "Setting the Maximum Cost" below.

Call Waiting

Once you activate this function, you can receive a second call while talking.
Idle > Menu > Phone Menu > Call Service > Call Waiting

Call Identification

In the Call Service menu, the Caller's ID and Withhold ID functions allow you to choose if you want to see a Caller's Identification.
Idle > Menu > Phone Menu > Call Service > Withhold ID or **Caller's ID**

Note: When checking status the phone must be registered with a network.

Charge Settings

First, a price per unit must be entered. This is the cost that the wireless service provider charges for one unit of call time.
Idle > Menu > Phone Menu > Call Service > Charge Settings
Next, edit the values. At this point you will be asked to enter your PIN2.
Then enter a currency unit.

Setting the Maximum Cost

This function allows you to pre-determine the maximum cost of calls made.
Idle > Menu > Phone Menu > Call Service > Charge Settings > Max Cost
Enter the maximum unit you want to set. At this point you will be asked to enter your PIN2.
Enter a value (number of units) which is to be the maximum permitted, and the corresponding cost will be displayed.

Note: The duration of one unit may vary during the day, peak and off-peak times. Therefore, the call charge can be calculated accordingly. However, call charge information may not give an accurate reflection of the cost charged by your wireless service provider.

Note: This feature is SIM card dependent.

Diverting Calls

Voice calls can be diverted in different circumstances and to different numbers. For example you may wish to have voice calls diverted to voicemail box in the event that the phone is turned off.

Idle > Menu > Phone Menu > Call Divert

Use to select the circumstances that you wish to activate call diverts. Then enter the phone number to divert calls to.

When a divert situation is enabled the divert icon ( ) is displayed. When updating or checking the status of **Call Divert** the phone must be registered with a network.

Restricting Calls

Call Barring

The "Call Bar" function is used to restrict certain outgoing and/or incoming calls. "Call Bar" is controlled by a security password that is supplied by the wireless service provider. When updating or checking the status of Call Bar the phone must be registered with a network. Different Call Bar restrictions can be used for voice call. Any combination of call restrictions can be set.

Idle > Menu > Phone Menu > Security > Call Bar

Use to select the circumstances you need, then enter the call bar password.

Network

Network setting enables you to change the network parameters.

Auto Network

You can set "Auto Network" **On** or **Off**.

New Network

Once you set the "Auto Network" **On**: the phone will automatically search for an available network. If you set it **Off**, you can select a network manually.

Network List

You can create and edit a network list according to your preferences.

Band Select

You can choose a network band: 900/1800, 900/1900, 900, 1800, 1900MHz.

Note: Check with your wireless service provider for the appropriate operating frequency band(s).

Application

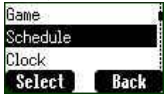
Game

Idle > Menu > Application > Game
Please refer to Page 22.

Schedule

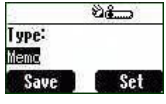
The Schedule can be used to create reminders for personal events and holidays.

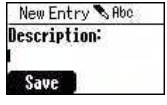
Idle > Menu > Application > Schedule The Schedule can be presented as a weekly or monthly format. Use numerical keys 2, 4, 6, 8 to select a day.



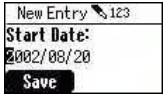
For the first time entry, highlight the date and press **Agenda > Select > New entry**. Choose a Type from **Memo, Meeting**.

Then press down arrow to add a **Description.**





Enter Start/ End **Date and Time** then press **Save.**



Clock

This phone has a clock with date/time, an alarm and a power off feature.

Clock Setting

Idle > Menu > Application > Clock > Clock Setting > Time & Date
Press **Select** to set time and date. In the “Clock Setting” menu, you can choose to display the time in idle mode.
Idle > Menu > Application > Clock > Clock Setting > Display Time > On/Off

Setting the Alarm

Idle > Menu > Application > Clock > Alarm

Press **Set** to set **Time** and choose a repeat format. Enter the digits with 24 hour clock. Press to exit. When the set time is reached, the alarm will sound. If the alarm is due during a call, an 'alarm' indicator will display.

Caution: Ensure that the setting of the Alarm will not interfere with any regulations whereby it may automatically power on when in an aircraft or medical facility etc. - see "Safety First" page 4.

Setting a Power Off Time

Idle > Menu > Application > Clock > Power Off Time

The phone can be set to turn itself off automatically at a specified time using the Power Off feature. The procedure for setting/adjusting the Power Off automatically is similar to setting the Alarm.

Calculator

Perform simple calculations (addition/subtraction/multiplication and division). **Idle > Menu > Application > Calculator**. Enter a number (maximum 7 digits) and it will be displayed on the upper right of the display. If a decimal point is required press , if a minus sign is needed press .

Use to select the arithmetic operation you need.

Enter a number (maximum 7 digits) and press (=) then the result will be displayed.

If is used to select another arithmetical operation, an intermediate calculation will be performed and the result displayed on the upper line.

Currency

The currency converter enables you to convert from/to a home currency using a conversion rate that you enter.

Idle > Menu > Application > Currency

Rate Setting

Enter an exchange rate in the space where the pencil icon is located. Press **OK** and **Save**. If a decimal point is required, press .

Rate Computing

Since you have saved the exchange rate, enter the numbers you want to convert and press **Convert.**

Records

Last Dialed Numbers and Redial

Recently dialed phone numbers will be stored in **Last Dialled**.
If the Caller Identification is known, the caller's phone number, for an answered call will be stored in the **Answered** menu and an unanswered call will be stored in the **Unanswered** menu.

When the store is full the next phone number will overwrite the oldest.

Idle > Menu > Records to view the **Last Dialled, Unanswered, Answered.**

Use to select the phone number (or name) you wish to redial and press . Or in idle, press to view the last dialed numbers directly. You can modify, save or delete the phone number before dialing.

Erase Records

Idle > Menu > Records > Erase Records
You can **Erase All, Erase Last Dialed, Erase Answered, Erase Unanswered**.

In Call Menu

During a call, there are several advanced functions that can be used; however, some of the in-call options are provided by your wireless service provider.

Holding Calls

Holding a Call

During a call, the display will show **Menu** and **Hold**.

1 Press **Hold.**
2 "Call Held" is displayed.
3 Press to retrieve the call.

Call Waiting

During a call, if a second call is incoming, the display will show **Reject** and **Swap.**

1 Press **Swap.** Places the first call on hold. Talk to the second person.
2 "Call Held" is displayed.
3 Press to select **Swap** to retrieve the call.

Hands Free

During a call, press **Menu > Hands Free.** The Hands Free speaker will be activated and you can have a conversation without holding the phone.

Accepting/ Rejecting a Second Call

A second call can be received, if "Call Waiting" is turned on. This is enabled from **Idle > Menu > Phone Menu > Call Service > Call Waiting**.
During a call:

1 Press or to accept a call.
2 The current call will be placed on hold.
OR
1 Press or to **Reject** the incoming call.

Conference

A conference call enables four calls to be in conversation at the same time.

1 Call the first party, announce the conference call, press **Hold**.
2 Call the second party, announce the conference call, press **Menu > Conference > Hold**. This connects the first two calls and places them on hold.
3 Call the third party, announce the conference call, press **Menu > Conference** to connect all four parties.

The phone will display **Conference** while the conference call is connected.

Note: This feature is network dependent.

Call Transfer

When two calls are in use:

During calls, press **Menu** and use to select **Call Transfer**.
The two calls will be connected to each other and your call will be ended.

Note: Once two calls that have been transferred they cannot be added to a conference call.

Note: This feature is network dependent.

Menu Structure

1 **Personalise**
- Language
- Tones
  - Ring Volume
  - Ring Type
  - Melody Composer
  - Key Tone
  - Warning Tone
- Display Setting
  - Idle Screen
  - Greeting
  - Animation
  - Contrast
  - Backlight
- Alert Type
  - Ring Only
  - None
  - Ring & Vibration
  - Vibration Only
- Profile Mode
- User Messages
- Auto Answer
- Any Key Answer
- Defaults
- Own Menu
- My Phonebook
- T9 Input

2 **Game (STK)**

3 **Phonebook**
- Browse
- Create
- Group Setting
- Review
- My Numbers
- Hot Key Dial
- My Phonebook

4 **Browser**
- Start Browser
- Bookmarks
- Sever Setting

5 **Key Guard**

6 **Messages**
- Received List
- Send List
- Create
- User Messages
- Review
- Parameters
- Broadcast

7 **Phone Menu**
- Call Service
  - Time/Charges
  - Call Waiting
  - Withhold ID
  - Caller's ID
  - Charge Settings
- Call Divert
  - All Voice Calls
  - Not Reachable
  - No Reply
  - Busy
  - Status Check
  - Cancel All
- Security
  - Call Bar
  - Codes
  - Fixed Dial
  - SIM Lock
- Network
  - Auto Network
  - New Network
  - Network List
  - Band Select

8 **Application**
- Game (STK)
- Schedule
- Clock
  - Clock Setting
  - Alarm
  - Power Off Time
- Calculator
- Currency

9 **Records**
- Last Dialled
- Answered
- Unanswered
- Erase Records

Trouble Shooting

Problem	Cause	Remedy
Phone will not turn on		Check that the battery is fully charged and correctly connected to the phone
Extremely short battery life for a new battery	The network you are using and the condition of the battery can affect battery life	
Short battery life for an old battery	The battery has worn out	Replace with a new fully charged battery
The charging indicator does not light, the battery level indicator does not appear and the phone cannot be turned on when charging	The battery is not attached to the phone or when the battery has been deeply discharged the phone will take a short time until the indicator lights	Leave the phone charging the battery for a few minutes before the indicator is lit and attempting to turn it on
Battery fails to charge	The battery is not attached to the phone	Ensure the battery is attached to the phone prior to charging.
	Battery has been connected to the phone after AC adapter has been turned on	
Calls cannot be made	The phone is locked	Unlock the phone
	Outgoing calls are barred	Disable the outgoing call barring, or barred dial
	The phone is not registered to a network	Move to a coverage area and operate your phone after it has registered with a network.

Calls cannot be made from Fixed Dial Store		Check your SIM supports Fixed Dial Check if the Fixed Dial is turned on Check the phone number is stored in the Fixed Dial Turn the phone on
Calls cannot be received	The phone is not turned on	Turn the phone on.
	Incoming calls are barred	Disable the incoming call barring.
	The phone is not registered to a network	Move to a coverage area and operate your phone after it has registered with a network.
Emergency calls cannot be made	You are not in a GSM coverage area	Check that the antenna symbol is displayed move to a coverage area and operate your phone when antenna symbol is displayed
Phone numbers cannot be recalled from phonebook	The phone is locked	Unlock the phone
	Phone number has been restricted	Turn off restriction

WAP Settings

Use the table below to record your WAP settings.

Item	Current Setting
Server Name	

Consumer Update on Mobile Phones

(Published by U.S. Food and Drug Administration, Center for Devices and Radiological Health, October 20, 1999.)

FDA has been receiving inquiries about the safety of mobile phones, including cellular phones and PCS phones. The following summarizes what is known—and what remains unknown—about whether these products can pose a hazard to health, and what can be done to minimize any potential risk. This information may be used to respond to questions.

Why the concern?

Mobile phones emit low levels of radiofrequency energy (i.e., radiofrequency radiation) in the microwave range while being used. They also emit very low levels of radiofrequency energy (RF), considered non-significant, when in the stand-by mode. It is well known that high levels of RF can produce biological damage through heating effects (this is how your microwave oven is able to cook food). However, it is not known whether, to what extent, or through what mechanism, lower levels of RF might cause adverse health effects as well. Although some research has been done to address these questions, no clear picture of the biological effects of this type of radiation has emerged to date. Thus, the available science does not allow us to conclude that mobile phones are absolutely safe, or that they are unsafe. However, the available scientific evidence does not demonstrate any adverse health effects associated with the use of mobile phones.

What kind of phones are in question?

Questions have been raised about hand-held mobile phones, the kind that have a built-in antenna that is positioned close to the user's head during normal telephone conversation. These types of mobile phones are of concern because of the short distance between the phone's antenna — the primary source of the RF — and the person's head. The exposure to RF from mobile phones in which the antenna is located at greater distances from the user (on the outside of a car, for example) is drastically lower than that from hand-held phones, because a person's RF exposure decreases rapidly with distance from the source. The safety of so-called "cordless phones", which have a base unit connected to the telephone wiring in a house and which operate at far lower power levels and frequencies, has not been questioned.

How much evidence is there that hand-held mobile phones might be harmful?

Briefly, there is not enough evidence to know for sure, either way; however, research efforts are on-going. The existing scientific evidence is conflicting and many of the studies that have been done to date have suffered from flaws in their research methods. Animal experiments investigating the effects of RF exposures characteristic of mobile phones have yielded conflicting results. A few animal studies, however, have suggested that low levels of RF could accelerate the development of cancer in laboratory animals. In one study, mice genetically altered to be predisposed to developing one type of cancer developed more than twice as many such cancers when they were exposed to RF energy compared to controls. There is much uncertainty among scientists about whether results obtained from animal studies apply to the use of mobile phones. First, it is uncertain how to apply the results obtained in rats and mice to humans. Second, many of the studies that showed increased tumor development used animals that had already been treated with cancer-

causing chemicals, and other studies exposed the animals to the RF virtually continuously — up to 22 hours per day.

For the past five years in the United States, the mobile phone industry has supported research into the safety of mobile phones. This research has resulted in two findings in particular that merit additional study:

1. In a hospital-based, case-control study, researchers looked for an association between mobile phone use and either glioma (a type of brain cancer) or acoustic neuroma (a benign tumor of the nerve sheath). No statistically significant association was found between mobile phone use and acoustic neuroma. There was also no association between mobile phone use and gliomas when all types of gliomas were considered together. It should be noted that the average length of mobile phone exposure in this study was less than three years. When 20 types of glioma were considered separately, however, an association was found between mobile phone use and one rare type of glioma, neuroepithelliomatous tumors. It is possible with multiple comparisons of the same sample that this association occurred by chance. Moreover, the risk did not increase with how often the mobile phone was used, or the length of the calls. In fact, the risk actually decreased with cumulative hours of mobile phone use. Most cancer causing agents increase risk with increased exposure. An ongoing study of brain cancers by the National Cancer Institute is expected to bear on the accuracy and repeatability of these results.[1]
2. Researchers conducted a large battery of laboratory tests to assess the effect of exposure to mobile phone RF on genetic material. These included tests for several kinds of abnormalities, including mutations, chromosomal aberrations, DNA strand breaks, and structural changes in the genetic material of blood cells called lymphocytes. None of the tests showed any effect from the RF except for the micronucleus assay, which detects structural effects on the genetic material. The cells in this assay showed changes after exposure to simulated cell phone radiation, but only after 24 hours of exposure. It is possible that exposing the test cells to radiation for this long resulted in heating. Since this assay is known to be sensitive to heating, heat alone could have caused the abnormalities to occur. The data already in the literature on the response of the micronucleus assay to RF are conflicting. Thus, follow-up research is necessary.[2]

FDA is currently working with government, industry, and academic groups to ensure the proper follow-up to these industry-funded research findings. Collaboration with the Cellular Telecommunications Industry Association (CTIA) in particular is expected to lead to FDA providing research recommendations and scientific oversight of new CTIA-funded research based on such recommendations.

Two other studies of interest have been reported recently in the literature:

1. Two groups of 18 people were exposed to simulated mobile phone signals under laboratory conditions while they performed cognitive function test. There were no changes in the subjects' ability to recall words, numbers, or pictures, or in their spatial memory, but they were able to make choices more quickly in one visual test when they were exposed to simulated mobile phone signals. This was the only change noted among more than 20 variables compared.[3]
2. In study of 209 brain tumor cases and 425 matched controls, there was no increased risk of brain tumors associated with mobile phone use. When tumors did exist in certain locations, however, they were more likely to be on the side of the head where the mobile phone was used. Because this occurred in only a small number of cases, the increased likelihood was too small to be statistically significant.[4]

In summary, we do not have enough information at this point to assure the public that there are, or are not, any low incident health problems associated with use of mobile phones. FDA continues to work with all parties, including other federal agencies and industry, to assure that research is undertaken to provide the necessary answers to the outstanding questions about the safety of mobile phones.

What is known about cases of human cancer that have been reported in users of handheld mobile phones?

Some people who have used mobile phones have been diagnosed with brain cancer. But it is important to understand that this type of cancer also occurs among people who have not used mobile phones. In fact, brain cancer occurs in the U.S. population at a rate of about 6 new cases per 100,000 people each year. At that rate, assuming 80 million users of mobile phones (a number increasing at a rate of about 1 million per month), about 4800 cases of brain cancer would be expected each year among those 80 million people, whether or not they used their phones. Thus it is not possible to tell whether any individual's cancer arose because of the phone, or whether it would have happened anyway. A key question is whether the risk of getting a particular form of cancer is greater among people who use mobile phones than among the rest of the population. One way to answer that question is to compare the usage of mobile phones among people with brain cancer with the use of mobile phones among appropriately matched people without brain cancer. This is called a case-control study. The current case-control study of brain cancers by the National Cancer Institute, as well as the follow-up research to be sponsored by industry, will begin to generate this type of information.

What is FDA's role concerning the safety of mobile phones?

Under the law, FDA does not review the safety of radiation-emitting consumer products such as mobile phones before marketing, as it does with new drugs or medical devices. However, the agency has authority to take action if mobile phones are shown to emit radiation at a level that is hazardous to the user. In such a case, FDA could require the manufacturers of mobile phones to notify users of the health hazard and to repair, replace or recall the phones so that the hazard no longer exists.

Although the existing scientific data do not justify FDA regulatory actions at this time, FDA has urged the mobile phone industry to take a number of steps to assure public safety. The agency has recommended that the industry:

- support needed research into possible biological effects of RF of the type emitted by mobile phones;
- design mobile phones in a way that minimizes any RF exposure to the user that is not necessary for device function; and
- cooperate in providing mobile phone users with the best possible information on what is known about possible effects of mobile phone use on human health.

At the same time, FDA belongs to an interagency working group of the federal agencies that have responsibility for different aspects of mobile phone safety to ensure a coordinated effort at the federal level. These agencies are:

- National Institute for Occupational Safety and Health
- Environmental Protection Agency
- Federal Communications Commission
- Occupational Health and Safety Administration
- National Telecommunications and Information Administration
- The National Institutes of Health also participates in this group.

In the absence of conclusive information about any possible risk, what can concerned individuals do?

If there is a risk from these products — and at this point we do not know that there is — it is probably very small. But if people are concerned about avoiding even potential risks, there are simple steps they can take to do so.

For example, time is a key factor in how much exposure a person receives. Those persons who spend long periods of time on their hand-held mobile phones could consider holding lengthy conversations on conventional phones and reserving the hand-held models for shorter conversations or for situations when other types of phones are not available.

People who must conduct extended conversations in their cars every day could switch to a type of mobile phone that places more distance between their bodies and the source of the RF, since the exposure level drops off dramatically with distance. For example, they could switch to a mobile phone in which the antenna is located outside the vehicle, a hand-held phone with a built-in antenna connected to a different antenna mounted on the outside of the car or built into a separate package, or a headset with a remote antenna to a mobile phone carried at the waist. Again, the scientific data do not demonstrate that mobile phones are harmful. But if people are concerned about the radiofrequency energy from these products, taking the simple precautions outlined above can reduce any possible risk.

Where can I find additional information?

For additional information, see the following websites:

- Federal Communications Commission (FCC) RF Safety Program (select "Information on Human Exposure to RF Fields from Cellular and PCD Radio Transmitters"): **http://www.fcc.gov/oet/rfsafety**
- World Health Organization (WHO) International Commission on Non-Ionizing Radiation Protection (select Qs & As): **http:// www.who.int/peh-emf**
- United Kingdom, National Radiological Protection Board: **http://www.nrpb.org.uk**
- Cellular Telecommunications Industry Association (CTIA): **http://www.wow-com.com**
- U.S. Food and Drug Administration (FDA) Center for Devices and Radiological Health: **http://www.fda.gov/cdrh/consumer/**

1 Muscat et al. "Epidemiological Study of Cellular Telephone Use and Malignant Brain Tumors". In: State of the Science Symposium; 1999 June 20; Long Beach, California.

2 Tice et al. "Tests of mobile phone signals for activity in genotoxicity and other laboratory assays". In: Annual Meeting of the Environmental Mutagen Society. March 29,1999, Washington, D.C. and personal communication, unpublished results.

3 Preece, AW, Iwi, G, Davies-Smith, A, Wesnes, K, Butler, S, Lim, E, and Varey, A. "Effect of a 915-MHz simulated mobile phone signal on cognitive function in man". Int. J. Radiat. Biol., April 8, 1999.

3 Hardell, L, Nasman, A, Pahlson, A, Hallquist, Aand Mild, KH. "Use of cellular telephones and the risk for brain tumors: a case-control study". Int. J. Oncol., 15: 113-116, 1999.

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Panasonic Digital Communications and Security Company (referred to as the "Warrantor") will repair or replace this product with new or refurbished parts or product, at Panasonic's sole option, free of charge, in the U.S.A. in the event of a defect in materials or workmanship from the date of original purchase as follows:

HANDHELD CELLULAR TELEPHONE (except as listed below) - For one (1) year.
ACCESSORIES (packaged with the Handheld Kit) - For one (1) year
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To exercise your warranty return the product and a copy of the original dated purchase receipt, pre-paid, to Panasonic at the address listed below: Please be sure to include your return address and a description of the alleged defect.

Panasonic Cellular Repair Department
14800 FAA Blvd., Suite 100
Fort Worth, TX 76155

Panasonic strongly recommends that the product be adequately packed to avoid shipping damage. You may also want to insure the product. Panasonic will return the repaired product pre-paid to you at your U.S.A. address.

Please remove the SIM card from the phone prior to sending to Repair Department. The SIM card can be removed by detaching battery from phone and sliding the SIM card from the phone.

This warranty is extended only to the original purchaser. A valid purchase receipt or other proof of date of original purchase will be required before warranty service is rendered.

This warranty covers only failures due to defects in materials or workmanship that occur during normal use. It does not cover damage that occurs in shipment, failures that are caused by products not supplied by Panasonic, failures that result from accident, misuse, abuse, neglect, water damage, mishandling, misapplication, faulty installation, set-up adjustments, improper maintenance, alteration, improper antenna, inadequate signal pick-up, maladjustment of consumer controls, line power surge, lightning damage, modification or service by anyone other than a Panasonic Authorized Servicenter or damage that is attributable to acts of God.

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